

RAMBIDI, N.G.; SPIRIDONOV, V.P.

Studying the molecular structure of high-temperature vapor based
on the scattering of fast electrons. Teplofiz. vys. temp. 2 no.2:
280-291 Mr-Apr '64. (MIRA 17:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

RAMBIDI, N.G.; SPIRIDONOV, V.P.

Study of the molecular structure of high-temperature steam based on the fast electron scattering. Part 2. Teplofiz. vys. temp. 2 no.3:464-478 My-Je '64.

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

SPIRIDONOV, V.P.

Mathematical statistic methods used for evaluating the coordination of theoretical and experimental intensity curves in the electron diffraction study of molecules. Zhur. strukt. khim. 5 no.3:359-362 My-Je '64. (MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

KHODCHENKOV, A.N.; SPIRIDONOV, V.P.; AKISHIN, P.A.

Analytic approximation of the atomic factors for electron
scattering. Kristallografiia 9 no.4:546-548 J1-Ag '64.
(MIRA 17:11)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

SPIRIDONOV, V.P.; TATEVSKIY, V.M.

Concerning a relationship in molecular refractions of gaseous and liquid inorganic substances. Vest. Mosk. un. Ser. 2:Khim. 19 no.1: 30-32 Ja-F '64. (MIRA 17:6)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.

SPERIDON, V. I.

Mathematical criteria of the selection of a structure model.
Izv. Akad. Nauk SSSR Ser. Fiz.-Mat. Nauk. 1964 no. 4:26-29. 21-Aug '64.

(MIRA 18:8)

I. Katedra fizicheskoy khimii Moskovskogo universiteta.

SPIRIDONOV, V.P.

Statistical criteria for the detection of separate internuclear distances. Vest. Mosk. un. Ser. 2: Khim. 19 no.5:35-39 S-0 '64.
(MIRA 17:11)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.

SPIRIDONOV, V.P.

Statistical calculation of the correlation of ordinates of the experimental intensity curve in a criterion of selecting a structural model. Vest. Mosk. un. Ser. 2: Khim. 19 no.6:3-7
N.D '64. (MIRA 18:3)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.

S/0076/64/038/002/0405/0410

ACCESSION NR: AP4019522

AUTHOR: Spiridonov, V. P. (Moscow); Tatevskiy, V. M. (Moscow)

TITLE: Some laws for the internuclear distances governed by chemical bonds of different types in polyatomic molecules

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 2, 1964, 405-410

TOPIC TAGS: internuclear distance, polyatomic internuclear distance, chemical bond, polyatomic molecule

ABSTRACT: In earlier studies, the second author arrived at the conclusion that internuclear distances typical of the chemical bonds of two given atoms in different molecules are characterized not only by the chemical individuality of these atoms and the parity of corresponding bonds but also by the valent state of each of the bonded atoms. These internuclear distances remain the same in different molecules if other conditions are identical. Other atoms not participating in the bond have but a slight influence on the above distance (some 0.02-0.03 Å). The purpose of the present work was to discuss the laws governing these internuclear distances in polyatomic molecules of different types. An analysis of

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ACCESSION NR: AP4019522

the average values of internuclear distances in different type bonds formed by atoms of different groups in the periodic system, indicates the governing laws in specifically selected groups of molecules. These laws expressed as linear changes in internuclear distances can be used for the evaluation of average amounts of internuclear distances in polyatomic molecules where no experimental data are available.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University)

SUBMITTED: 18Feb64

DATE ACQ: 31Mar64

ENCL: 00

SUB CODE: CH

NO REF SOV: 012

OTHER: 001

Cord 2/2

SPIRIDONOV, V.P.; RAMBIDI, H.C.; ALEKSEYEV, N.V.

Present state of gas electron diffraction study. Theory of atomic scattering of electrons. Zhur. struk. khim. 6 no.3:481-504 My-Je (MIRA 18:8) '65.

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova i Institut elementoorganicheskikh soedineniy AN SSSR.

TATEVSKIY, V.M., SPIRIDONOV, V.P.

Remarks on G.V. Bykov's article "The terms electronegativity and electrophilic characteristic of atoms in molecules" and on "Electronegativity of atoms (atomic cores) in molecules." Part 1. Zhur. fiz. khim. 39 no.5:1284-1289 My '65.

Remarks on G.V. Bykov's articles "Term of electronegativity and electrophilic characteristic of atoms in molecules" and "Electronegativity of atoms (atomic cores) in molecules. Part 2. Ibid.:1291-1295 (MIRA 18:8)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

SPIRIDONOV, V.P.; KHODCHENKOV, A.I.; AKISHIN, P.A.

Electron diffraction study of the structure of a cesium sulfate molecule in vapors. Zhur. strukt. khim. 6 no. 4:633-634 J1-Ag '65 (MIRA 19:1)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
Submitted February 17, 1965.

KHODCHENKOV, A.N.; SPIRIDONOV, V.P.; AKISHIN, P.A.

Electron diffraction study of the structure of lithium and
sodium nitrate molecules in the vapor state. Zhur.strukt.khim.
6 no.5:765-766 S-O '65. (MIRA 18:12)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
Submitted February 17, 1965.

L 39767-66 EWP(n)/EWP(L)/ETI IJP(c) WW/JD/JG/GD-2

ACC NR: AP6013822

SOURCE CODE: UR/0189/65/000/006/0034/0035

AUTHOR: Spiridonov, V. P.; Khodchenkov, A. N.; Akishin, P. A. 18 B

ORG: Chair of Physical Chemistry, Moscow State University (Kafedra fizicheskoy khimii, Moskovskiy gosudarstvennyy universitet)

TITLE: Electron diffraction study of the structure of the potassium perrhenate molecule in vapors

SOURCE: Moscow. Universitet. Vestnik. Seriya II. Khimiya, no. 6, 1965, 34-35

TOPIC TAGS: electron diffraction analysis, potassium compound, rhenium compound, molecular structure, photometric analysis 21 21 21 18

ABSTRACT: The structure of the potassium perrhenate molecule $KReO_4$ in the vapor state was studied with the electron diffraction camera used at MGU for investigating compounds of low volatility. The substance was vaporized off a molybdenum and a nickel ampoule, the vapor being emitted along the direction of the electron beam at a temperature of 800-900°C. The electron diffraction patterns were read by visual and photometric evaluation of the electron scattering intensity, using radial distribution and successive approximation methods. The radial distribution curve had peaks at r values of 1.75, 2.20 and 2.75 Å, which were readily interpreted as the distances Re=O, K-O, and the composition of distances between unbound oxygen atoms, respectively. The final configuration of $KReO_4$ was determined by the successive approximation method.

UDC: 539.19 + 541.57

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Card 2/2 45

L 39888-66 LIT/1/100-10 LIP(c) AT/20/10/GD-2
 ACC NR: AP6016884 SOURCE CODE: UR/0192/65/006/005/0765/0766

AUTHOR: Khodchenkov, A. N.; Spiridonov, V. P.; Akishin, P. A.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Electron-diffraction study of the structure of lithium nitrate and sodium nitrate molecules in the vapor state

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 5, 1965, 765-766.

TOPIC TAGS: electron diffraction analysis, sodium nitrate, nitrate, lithium compound, electron beam, camera, photography

ABSTRACT: Results of an electron-diffraction study of the vapor state of lithium nitrate and sodium nitrate are presented. The experiments were carried out on the MGU high-temperature electron-diffraction camera. Purchased preparations of lithium nitrate and sodium nitrate, classified as "analytically pure," were used in the investigation. Photographs of the electron-diffraction patterns of vapors of these compounds were made from a platinum ampule with release of vapor along the direction of the electron beam at a temperature of 450-500°C. Seventeen series of electron-diffraction patterns were obtained from the vapors of these compounds, using a rotating sector on diapositive film, coated with

Card 1/2

UDC: 539.27

SPIRIDONOV, V. St.

Programmed teaching, and teaching machines. Mat i fiz Bulg
7 no.4:46-48 J1-Ag '64.

AUTHOR: Spiridonov, V.V. (Engineer)

97-5-4/13

TITLE: Load carrying capacity of horizontal joints of large panel constructions. (Nesushchaya sposobnost' gorizonta'l'nykh stykov krupnopanel'nykh zdaniy).

PERIODICAL: "Beton i Zhelezobeton" (Concrete and Reinforced Concrete) 1957, No.5, pp.199 - 202 (USSR).

ABSTRACT: The investigations regarding the strength of the joints was carried out by S.A. Sementsov of the TsNIPS (УНМЦ) in 1933. In 1937 N.F. Davydov investigated the same problem in the Ukrainian State Institute for Constructions (Ukrainskiy Gosudarstvenniy Institut Sooruzhenniy), as well as A.P. Mandrikov in 1955 in the Institute for Building Techniques of the Academy of Architecture of the USSR (Institut Stroitel'noy Tekhniki Akademii Arkhitektury SSSR). In 1950, 1953 and 1954 A.S. Kalmanok, K.V.Aleksandrov and O.E. Pflaumer carried out experiments on various types of constructional joints in the Institute for Building Techniques of the Academy of Architecture of the USSR. In 1956, in the Laboratory for Physical and Mechanical Investigations of the Institute of Building Techniques (Laboratoriya Fiziko-Mekhanicheskikh Isytaniy Instituta Stroitel'noy Tekhniki)

Card 1/3 investigations were carried out on 16 joints of hollow and

Load carrying capacity of horizontal joints of large panel constructions. (Cont.) 97-5-4/13

12 joints of solid concrete blocks under compression. The joints were 22 mm, 25 mm and 40 mm wide on cement-sand mortar (in 1:3 mix) with a water/cement ratio of 0.45. Quick setting cement was used, with an "activity" of 500. Results of these investigations are shown in Tables 1 and 2. Test cubes were subjected to short-time loading of 500 t and the deflection values read on indicators. The results obtained are summarized as follows: the strength of the joints depends on the construction of the slabs and of the joints, on the method of filling the joints, on their widths, on the quality of the mortar and on the strength of the concrete. If the jointing mortar is not weaker than the concrete of the slabs, regardless of the width of the joint, then the joint does not lower the load-bearing capacity of the slab. If the mortar is stronger than the concrete then the load-bearing capacity of the joint does not increase. If the jointing mortar is weaker than the concrete then the load-bearing capacity of the jointed slabs is correspondingly lower and the load-bearing capacity decreases with the width of the joint. The load-bearing capacity is in direct relationship to the strength of the mortar in the joint. Theoretical deductions and calcula-

Card 2/3

SPIRIDONOV, V.V.; BESEDINA, O.S., red.; OLERSKIY, Ye.Ye., tekhn.red.

[Testing the bearing capacity of bent compressional concrete construction elements] Issledovanie nesushchei sposobnosti szhato-izognutykh betonnykh elementov. Moskva, Otdel nauchno-tekhn. informatsii, 1958. 23 p. (MIRA 12:2)
(Concrete slabs--Testing)

SPIRIDONOV, V. V.: Master Tech Sci (diss) -- "Investigation of the bearing strength of concrete, hollow-bodied, compressed-bent panels and their basic joints". Moscow, 1959. 21 pp (Moscow Inst of Municipal Construction Engineers MIICS of the Moscow City Executive Committee), 150 copies (KL, No 17, 1959, 109)

SOV/95-59-3-4/14

14(9)

AUTHORS: Petrov, I.P., Candidate of Technical Sciences, and Spiridonov, V.V., Engineer

TITLE: "Serpentine" Method of Pipeline Laying (Prokladka truboprovodov "zmeykoy")

PERIODICAL: Stroitel'stvo truboprovodov, 1959, Nr 3, pp 10-15 (USSR)

ABSTRACT: Geological conditions make it at times necessary to resort to overground constructions of pipelines, as for instance in crossing over ravines, swamps, certain rivers, etc. In these cases the pipeline becomes subject to such influences as those of changing temperature and internal pressure, which require allowance to be made for longitudinal deformations. This can be achieved either by the insertion of special compensatory (U-shaped) sections, or by a method, which provides for the pipeline to be laid in a serpentine, or wave form, with half-a-wave extending over a distance of 100-250 m. The pipeline rests on so called dead supports, which permit of no movement of the pipeline, and on intermediate or movable supports on which the pipeline is hinged, permitting a lengthwise shift of the pipe. The overground pipeline construction

Card 1/2

PETROV, I.P., kand.tekhn.nauk; SPIRIDONOV, V.V., kand.tekhn.nauk

Above-ground crossings with angle bends. Stroi. truboprov. 6
no. 2:6-9 F '61. (MIRA 14:5)

(Pipelines)

SPIRIDONOV, V.V., kand.tekhn.nauk

Vibrations in overhead pipelines. Stroi.truboprov. 6 no.11:11-14
N '61. (MIRA 15:4)

(Pipelines)

SPIRIDONOV, V.V.

Special features of the construction of main gas pipelines in
permafrost regions. Sbor.nauch.rab.AKKH no.12:120-134 '62.

(MIRA 16:4)

(Gas, Natural--Pipelines)

(Frozen ground)

SPIRIDONOV, V.V.

Experimental studies of the functioning of a self-compensating
gas pipeline built above ground. Sbor.nauch.rab.AKKH no.12:
193-205 '62. (MIRA 16:4)
(Gas, Natural—Pipelines)

SPIRIDONOV, V.V., kand.tekhn.nauk

Laying pipelines across a swamp on piles. Stroi. truboprov.

7 no.8:28-29 Ag '62.

(MIRA 15:9)

(Pipelines) (Piling (Civil engineering))

PETROV, I. P., kand. tekhn. nauk; SPIRIDONOV, V. V., kand. tekhn. nauk

Design of the supports for laying pipelines above ground.
Stroi. truboprov. 8 no.4:12-17 Ap '63. (MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'-
stvu magistral'nykh truboprovodov (for Spiridonov).

(Pipelines—Design and construction)

ACCESSION NR: AP5002652

S/0095/64/000/010/0003/0006

AUTHOR: Spiridonov, V. V.

TITLE: Solution of engineering problems of the Tazovskoye-Noril'sk gas pipeline

SOURCE: Stroitel'stvo truboprovodov, no. 10, 1964, 3-6

TOPIC TAGS: pipeline transportation system, natural gas

Abstract: The Tazovskoye-Noril'sk gas-main, the most northerly in the world, is 640 km long, starting at Taz and stretch eastward to Igraki, crossing the Yenisey and more than 20 shallow rivers. From Igraki it turns north along the western slope of the Lontokoyskiy Kamen to Noril'sk and Talnakh, crossing the Khantayka and Noril'ka rivers as well as many other water barriers. Much of this route is highly broken ground with permafrost, swamps, and many other serious engineering obstacles. This main is scheduled for construction in 1965 and for completion by the third quarter of 1967. Since all construction materials must be delivered by water, the navigability season of 1965 must be exploited to the maximum. Planning of the line and the necessary logistics were completed in September of 1964, despite the fact that only reconnaissance prospecting data were available. Plan-

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ACCESSION NR: AP5002652

ning work is necessarily continuing. Forestation, Climate, and soil conditions are described. The line is to be laid largely above the ground on a trestle. Pumping stations will not be required. About 525 km of the line will be 1020 mm pipe and 125 km will be 720 mm pipe. Engineering requirements for the components, materials, and assembly are described. Technical problems involved in underground sections (where an above-ground route is impossible), e. g. -50° gas passing underground during winter would freeze the earth around the pipe and thereby set up large stresses are considered. Problems involved in river crossing are also touched on. The line will be inspected by helicopter. Shelters with landing pads and supplies are planned along the line, which will also be paralleled by a radio relay line extending to Moscow. The principal procedures and steps to be followed in building the line are outlined.

ASSOCIATION: none

SUBMITTED: OO

NO REF SOV: 000

ENCL: OO

OTHER: 000

SUB CODE: GO

JPRS

Card 2/2

SPIRIDONOV, V.V., kand. tekhn. nauk

Calculating overland self-balancing systems of pipelines taking into consideration the displacement of supports. Trudy VNIIST no.15:66-77 '63.

New method for laying pipelines through a swamp. Ibid.:91-97

Theoretical investigation of elastic eccentrically compressed concrete elements. Ibid.:316-336

SPIRIDONOV, V.E.

Technical solutions of the linear part of the Tazovo-Noril'sk Gas Pipeline. Stroi. truboprov. 9 no.10:3-6 0 '64. (MIRA 18:7)

PETROV, Igor' Ietrevich; SPIRIDONOV, Viktor Vasil'yevich;
PEREVERZEV, V.V., red.; RASTOVA, G.V., ved. red.

[Overground laying of pipelines] Nadzemnaia prokladka truboprovodov. Moskva, Nedra, 1965. 446 p. (MIRA 18:3)

CHIPPONOV, Vasilin

A modification of the gradient protection method in non-linear programming. Izv Mat inst BAN 8:145-157 '64.

1. Submitted November 5, 1963.

L 31308-66 EWT(1)/T JK

ACC NR: AP6022584

(A,N)

SOURCE CODE: UR/0346/66/000/001/0035/0036

AUTHOR: Spiridonov, Yo. (Veterinary physician)

ORG: Tatar Trust "Skotootkorm" (Tatarskiy trest "Skotootkorm")

TITLE: Eradication of foot-and-mouth disease in the primary focus

SOURCE: Veterinariya, no. 1, 1966, 35-36

TOPIC TAGS: foot and mouth disease, disease control

ABSTRACT: In this article the author affirms that the current Instruction Concerning Control of Foot-and-Mouth Disease guarantees rapid eradication of the disease in primary foci and cites the example of seven kolkhozes in the Tatarskaya ASSR where strict observance of the measures listed in the Instruction resulted in eradication of the disease and prevented spread of the infection. [JPRS]

SUB CODE: 06 / SUBM DATE: none

Card 1/1 CC

UDC: 619:616.988.43-084:636.2

0915

06.01

AMBAT'YELLO, G.P.; BRAVERMAN, I.B.; KISELEV, F.I.; SPIRIDONOV, Ye.Ye.

Methods and some results of the use of anesthesia for the prevention and treatment of traumatic shock under work conditions of the antishock teams of the first medical aid station of the city of Moscow. Trudy Inst. im. N.V. Sklif. 9:249-254 '63. (MIRA 18:6)

1. Stantsiya skoroy meditsinskoy pomoshchi Moskvyy.

SPIRIDONOV, Yu. (Yakutskaya ASSR)

They were the first. Grazhd. av. 21 no.11:14-15 N '64.
(MIRA 18:3)

ACC NR: AP6030242 (AV) SOURCE CODE: UR/0394/66/004/007/0033/0037

AUTHOR: Spiridonov, Yu. Ya.

ORG: Georgia Branch of the All-Union Scientific Research Institute of Phytopathology (Gruzinskiy filial Vsesoyznogo nauchno-issledovatel'skogo instituta fitopatologii)

TITLE: Use of herbicides in drainage canals in humid subtropical conditions

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 7, 1966, 33-37

TOPIC TAGS: weed control, drainage canal, herbicide

ABSTRACT: In 1964 and 1965, experiments were made at the All-Union Scientific Research Institute of Phytopathology in Kobuletskiy Rayon of the Adzharskaya ASSR to find the most effective herbicides for destroying weeds in drainage systems of the area. The experiment also attempted to find the optimum dosage of herbicides, their type of activity, the duration of the toxic effect, the rate of washing away and detoxication of the compounds and also the quantities and types of weeds. The herbicides were examined as administered in the following dosages: diuron: 10, 20, 30 and 40 kg/ha; atrazine: 10, 15, 20 kg/ha; dalapon: 20, 30, 40 kg/ha; and 2,4-D butylher: 10 kg/ha. The experiments were made in large collector canals where

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UDC: 632.954:626.86

L 05123-67

ACC NR: AP6030242

the current is slow. The water level varied between 20 and 80 cm during the vegetation period. It was found that diuron, atrazine and dalapon are highly effective against weeds in the drainage canals of the Kolkhida lowland; 2,4-D has a short-lived effect (2—4 months). The duration of the effect of the herbicides depends on their solubility. c. 4-D and dalapon are phytotoxic for only 3—5 months; atrazine in doses of 20 kg/ha and especially diuron in doses of 40 kg/ha remain phytotoxic for two vegetation periods. Orig. art. has: 3 figures and 3 tables. [w. 4. 50] [GC]

SUB CODE: 02, 06, 07/ SUBM DATE: 09Nov65/ ORIG REF: 007/
SOV REF: 003/ OTH REF: 003/

Card 2/2

SPIRIDONOV, Yu. D.

Technic in apical roentgenography. Prob.tuberk., Moskva No.1:70-72
Jan-Feb 51. (CML 20:6)

1. Of the Ukrainian Scientific-Research Tuberculosis Institute (Director--Prof.B.M.Khmel'nitskiy).

SPIRIDONOV, YU. D.

USSR/Medicine - X-ray Equipment

Mar/Apr 51

"Wall Tomofluorograph (Author's Certificate No 75662," Yu. D. Spiridonov, Yalta Cen Clinical Sanitarium of the Naval Force

"Problemy Tuberkuleza" No 2, pp 72-74

Describes construction of a perfected tomofluorograph, referring to the fact that equipment of this type has been used at medical institutions of the Crimean south coast for the past 3 yrs.

198T46

SPIRIDONOV, Yu.D. (Yalta)

Large-frame tomofluorography of the lungs. Vest.rent.i rad. no.1:
60-62 Ja-F '55. (MLRA 8:5)

(LUNGS, radiography,
tomofluorography, large-frame technic)

* I. I. G. G., V. D.: "The methodology and technique of X-ray investigation of patients with tuberculosis of the lungs." Crimean State Medical Inst. and I.V. Stalin. Simferopol', 1956. (Dissertation for the Degree of Candidate in Medical Sciences).

Source: Kriticheskiy Istorik No. 28 1960 Moscow

SPIRIDONOV, Yu.D., polkovnik meditsinskoy sluzhby [deceased]

Modified cryptoscope for X-ray studies. Voen.-med.zhur. no.6:90
Je '59. (MIRA 12:9)

(FLUOROSCOPY, appar. & instruments
modified cryptoscope (Rus))

SPIRIDONOV, Yu.D.

Tomofluorographic diagnosis at tuberculosis institutions. Probl.
tub. 37 no.1:115-116 '59. (MIRA 12:2)

1. Iz Yaltinskogo Tsentral'nogo klinicheskogo sanatoriya.
(TUBERCULOSIS--DIAGNOSIS)

KECHKER, V. I.; MARTYNOVA, A. I.; SPIRIDONOV, Yu. S.

Data from an electron microscope study of Kaufmann-Wolf Epidermophyton culture. Vest. dermat. i ven. no.10:29-33 '61.
(MIRA 14:12)

1. Iz elektronno-mikroskopicheskoy laboratorii Ryazanskogo meditsinskogo instituta imeni I. P. Pavlova (dir. - prof. L. S. Sutulov) i Ryazanskogo oblastnogo kozhno-venerologicheskogo dispansera (glavnyy vrach - kandidat meditsinskikh nauk V. I. Kechker)

(DERMATOPHYTES) (ELECTRON MICROSCOPE)

MAKAROV, V.T.; YURIN, P.V.; SPIRIDONOV, Yu.Ya.

New methods of cultivating corn in turf-Podzolic soils. Vest.
Mosk.un.Ser.6: Biol., pochv. 19 no.1:61-73 Ja-I '64.
(MIRA 17:4)

1. Kafedra zemledeliya Moskovskogo universiteta.

TOPOLYANSKIY, A.B.; SPIRIDONOV, Yu.Ye.

Limiting the lead-lift elevation on the "Pioner" cranes. Rats. 1
izobr.predl.v stroi. no.119:9-10 '55. (MLRA 9:7)
(Cranes, derricks, etc.)

SPIRIDONOV, Yu.Ye., inzhener.

Method of producing wall panels. Biul.stroi.tekh. 13 no.5:18-19
My '56. (MLRA 9:8)

1. Stroytrest No. 3 UMR-30.
(Concrete slabs)

ROGAL'SKIY, S.M., inzh.; SPIRIDONOV, Yu.Ye., inzh.

Over-all mechanization of plastering. Bnl. tekhn. inform. 4 no.8:
21-23 Ag '58. (MIRA 11:8)

(Plastering—Equipment and supplies)

SPIRIDONOV, Yu.Ye., mekhanik; BELYKH, I.P., slesar'

Suspended bridge for finishing fascades. Suggested by IU.B.
Spiridonov, I.P. Belykh. Rats. i izobr. v stroi. no. 9:59-60
'59. (MIRA 13:1)

1. Po materialam stroitel'nogo tresta No. 3 Glavleningradstroya,
Leningrad, Fontanka, d. 23.
(Building--Equipment and supplies)

SPIRIDONOV, Yu.Ye.

Moveable plastering unit. Stroil.i dor.mash. 6 no.7:31 JI '61.
(MIRA 14:7)

(Plastering—Equipment and supplies)

SPIRIDONOVA, A.

Territory conference of highway transport workers. Avt.transp. 40
no.1:55 Ja '62. (MIRA 15:1)
(Maritime Territory--Transportation, Automotive)

SPIRIDONOVA, A.F.

Role of electrokymography in the study of pulmonary circulation
in chronic pneumonia in older children. Vest. rent. i rad. 40
no.6:29-33 N-D '65. (MIRA 19:1)

1. Rentgenovskiy otdel (nauchnyy rukovoditel' - prof. N.A. Panov,
zav. - kand. med. nauk I.V. Makarov) Gosudarstvennogo nauchno-
issledovatel'skogo pediatricheskogo instituta Ministerstva zdравo-
okhraneniya RSFSR, Moskva.

USSR / Farm Animals. Swine

Q

Abs Jour: Ref Zhur-Biol., No 5, 1958, 21488

Author : Volkopyalov B. P., ~~Spiridonova~~ A. G., Lebedeva T.
B., Matuskova A. N.

Inst :

Title : The Use of Antibiotics in Swine Breeding (Primeneniye
antibiotikov v svinovodstve)

Orig Pub: Svinovodstvo, 1957, No 7, 31-32

Abstract: The use of biomyacin and penicillin in raising starvel-
ing young pigs had a beneficial effect on their or-
ganism. For an experimental period which lasted 53
and 38 days, the test pigs were administered antibi-
otics daily. No loss occurred among them, while in
the two control groups the pigs perished to the ex-
tent of 16.7 and 11.7%. The best results in the treat-
ment with biomyacin were achieved when this drug was

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38

CHENYKAYEVA, Ye.A., metodist; SPIRIDONOVA, A.I., metodist; BYKOVA, A.F.

Farm work in August. Inform. biul. VDNKH no.8:33-34 Ag '63.
(MIRA 17:8)

1. Ekspozitsionnyy uchastok ovoshchnykh kul'tur otдела sel'sko-khozyaystvennogo proizvodstva Vystavki dostizheniy narodnogo khozyaystva SSSR (for Chenykayeva, Spiridonova). 2. Glavnyy metodist pavil'ona "Pchelovodstvo" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Bykova).

CHENYKAYEVA, Ye.A.; SPIRIDONOVA, A.I.; SAVZDARG, V.E., redaktor; PAVLOVA,
M.M., ~~tekhnicheskii redaktor~~

[Potatoes and vegetable and melon crops (exhibit plots); a guidebook]
Kartofel', ovoshchnye i bakhchevye kul'tury; uchastok eksponatnykh
posadok i posevov. Putevoditel'. Moskva, Gos. izd-vo selkhoz. lit-ry,
1956. 23 p. (MIRA 10:1)

1. Moscow. Vsesoyuznaya sel'skokhozyaystvennaya vystavka, 1954-
(Moscow--Vegetable gardening--Exhibitions)

KOVUN, P.K.; NEVZOROV, A.P.; ANTONENKO, G.P.; BUDINA, L.V.; VORONINA, Ye.P.;
GUSEV, P.I.; YELAGIN, M.N.; ZHURAVLEV, M.A.; ZALOZNYI, K.D.; KOMKOV, V.N.;
KOROBV, A.S.; KORCHAGIN, V.N.; LAVROV, V.N.; LAPSHINA, O.V.; LUTIKOV, I.Ye.;
MAKEVNIN, A.Ya.; MOROZOVA, F.I.; NEVZOROV, A.P.; PONOMARCHUK, M.K.; PUCH-
KOV, A.M.; RAZMOLOGOVA, A.M.; RUBIN, S.M.; SELEZNEVA, O.V.; SEMENOVA, F.I.;
SPIRIDONOVA, A.I.; SUSHCHEVSKIY, M.G.; USOV, M.P.; TARKOVSKIY, M.I.;
CHENYKAYEVA, Ye.A.; SHENDRIKOV, G.L.; SHUL'GIN, G.T.; TSITSIN, N.V., aka-
demik, redaktor; REVENKOVA, A.I., redaktor; KHOKHRINA, N.M., khudozhestven-
nyy redaktor; VESKOVA, Ye.I., tekhnicheskiiy redaktor; PEVZNER, B.I.,
tekhnicheskiiy redaktor.

[Plant breeding at the 1955 All-Union Agriculture Exhibition] Rastenie-
vodstvo na Vsesoiuznoi sel'skokhoziaistvennoi vystavke 1955 goda. Moskva,
Gos. izd-vo sel'khoz. lit-ry, 1956. 687 p. (MLRA 10:4)
(Moscow--Plant breeding--Exhibitions)

COUNTRY : USSR
 CATEGORY : Cultivated Plants - Potatoes, Vegetables, Cucurbits. M
 ABS. JOUR. : RZhBiol., No. 14, 1953, No. 63426
 AUTHOR : Spiridonova, A. I.
 INFO :
 TITLE : Complementary Illumination of Seedlings.

ORIG. PUB. : Sad 1 Ogrod, 1957, No. 12, 15-18

ABSTRACT : In 1957, different illuminating devices for the complementary illumination of cucumber seedlings of Mnogoplodnyy variety selected by A. I. Spiridonova, were tested in the hothouses of VSEKhV. The highest yield and the earliest fruit bearing were secured with the complementary illumination at the installation of Agrophysical Institute for 20 days with 10-14 hours per day from the time of the mass appearance of the sprouts. — E. A. Okorokova

Card: 1/1

*All-Union Agricultural Exhibition

ALEKSANDROV, S.V., kand.sel'skokhoz.nauk; BOGUSHCHYVSKIY, A.A., kand.tekhn.
nauk; VASHCHENKO, S.F., kand.sel'skokhoz.nauk; GERASIMOV, B.A.,
kand.sel'skokhoz.nauk; GROMOV, N.G. [deceased]; KORBUT, V.A.;
KUDREVICH, I.A.; MAMAYEV, M.G., kand.tekhn.nauk; NOVIKOV, A.P.;
OSNITSKAYA, Ye.A.; SIMANOVSKIY, A.Yu.; SLEPTSOV, S.A.; SPIRIDONOVA,
A.I.; TARAKANOV, G.I., kand.sel'skokhoz.nauk; CHENYKAYEVA, Ye.A.;
KITAYEV, S.I., red.; FILATOV, N.A., zaslužhennyy agronom RSFSR;
GRUDINKINA, A.P., red.; MARTYNOV, P.V., red.; ARTSYBASHEVA, A.P.,
tekhn.red.; BARBASH, F.L., tekhn.red.

[Vegetable growing under cover] Ovoshchevodstvo zashchishchennogo
grunta. Moskva, Izd-vo M-va sel'.khoz.SSSR, 1960. 279 p.

(MIRA 13:12)

(Vegetable gardening)
(Hotbeds)

(Greenhouses)

CHENYKAYEVA, Ye.A., metodist; SPIRIDONOVA, A.I., metodist.

Work in vegetable gardening in November. Inform. biul. VDNKH
no.11:25-26 N '63 (MIRA 18:1)

1. Ekspozitsionnyy uchastok ovoshehnykh kul'tur otдела sel'skogo
proizvodstva na Vystavke dostizheniy narodnogo khozyaystva
SSSR.

SPIRIDONOVA, A.S.

Telephone communication in Leningrad during the siege. Trudy LEIS
no.4:105-108 '59. (MIRA 13:10)
(Leningrad--Siege, 1941-1944) (Leningrad--Telephone)

SPIRIDONOVA, A. V.; MANDEL', Ya. M. (Tambov)

Incidence of diseases of the cardiovascular system as revealed
by data from a thorough study of rural districts of Tambov
Province. Zdrav. Ros. Feder. 6 no.5:12-15 My '62.
(MIRA 15:7)

(TAMBOV PROVINCE-CARDIOVASCULAR SYSTEM--DISEASES)

SPIRIDONOVA, F.V.; VINITSKAYA, R.S.

Modifications of external respiration following unilateral
pneumonectomy. Biul.eksp.biol. i med. 40 no.9:18-23 S '55.

(MLRA 8:12)

1. Iz laboratorii fiziologii (zav.-deystvitel'nyy chlen
AMN SSSR prof. P.K.Anokhin) Instituta khirurgii imeni A.V.
Vishnevskogo (dir.-chlen-korrespondent AMN SSSR prof. A.A.
Vishnevskiy) AMN SSSR, Moskva.

(RESPIRATION,

postop. in unilateral pneumonectomy)

(LUNGS, surgery,

pneumonectomy, postop. resp.)

KANAVETS, L.N.; SPIRIDONOVA, F.V.; MEL'NITSKAYA, Z.S.; IL'ICHEVA, Ye.M.
LYUDVINSKAYA, P.F.

Effect of climatic factors on some vegetative reflexes in
patients with neyrasthenia under the accustomed conditions
of the central belt. Vop.kur., fizioter. i lech. fiz. kul't.
28 no.2:108-115 Mr-Apr'63. (MIRA 16:9)

1. Iz Tsentral'nogo instituta kurortologii i fizioterapii (dir.-
kand.med. nauk G.N.Pospelova).

SPIRIDONOVA, G. I.

SISAKYAN, N.M.; VASIL'YEVA, N.A.; ~~SPIRIDONOVA, G.I.~~

Isolating nuclei from plant cells and studying their biochemical properties [with summary in English]. Biokhimiia 22 no.5:813-824 S-O '57. (MIRA 11:1)

1. Institut biokhimii im. A.N.Bakha, Akademii nauk SSSR, Moskva
(CELL NUCLEUS,
isolation from plant cells & biochem. (Rus))

MIRONENKO, A.V.; SPIRIDONOVA, G.I.; MAS'KO, A.A.

~~Chromatographic method for the separation and identification of~~
lupine alkaloids. Dokl. AN BSSR 3 no.2:70-73 # '59.
(MIRA 12:5)

1. Predstavleno akademikom AN BSSR N.F. Yermolenko.
(Alkaloids)

MIRONENKO, A.V.; SPIRIDONOVA, G.I.

Role of various organs in the biosynthesis of alkaloids in lupine
plants. Dokl. AN BSSR 3 no.7:311-314 J1 '59. (MIRA 12:11)

1. Predstavleno akademikom AN BSSR T.N. Godnevym.
(Lupine) (Alkaloids)

MIRONENKO, A.V.; SPIRIDONOVA, G.I.

Qualitative composition and amounts of free amino acids in lupine
plants. Biul. Inst. biol. AN BSSR no.5:181-185 '60.

(MIRA 14:7)

-- (LUPINE) * (AMINO ACIDS)

MIRONENKO, A.V.; SPIRIDONOVA, G.I.

Composition and content of free amino acids in alkaloidal
and nonalkaloidal blue lupine (*Lupinus angustifolius* L.).
Biul. Inst. biol. AN BSSR no.6:184-191 '61. (MIRA 15:3)

(LEPTINE)
(ALKALOIDS)

MITRONENKO, A.V.; SPIRIDONOVA, G.I.; MOZHAR, T.A.

Changes in the composition and amount of alkaloids in the yellow
lupine (*Lupinus luteus* L.) during its growth and development. Dokl.
AN BSSR 6 no.4:260-262 Ap '62. (MIRA 15:4)

1. Institut biologii AN BSSR. Predstavleno akademikom AN BSSR
T.N.Godnevym.

(LUPINE) (ALKALOIDS)

MIRONENKO, A.V. [Mironenka, A.V.]; SPIRIDONOVA, G.I. [Spirydonava, H.I.];
BEREZHNAYA, L.I.; ANOKHINA, V.S.; MOZHAR, T.A.

Restoration of alkaloid biosynthesis and lupine following
the intervarietal crossing of alkaloidless (forage) varieties.
Vestsi AN BSSR. Ser. biial. nav. no.1:69-73 '65.

(MIRA 18:5)

TURBIN, N. V., akademik; MIRONENKO, A. V.; SPIRIDONOVA, G. I.; ANOKHINA, V. S.

Restoration of alkaloid biosynthesis in hybrid lupine obtained from crossing incompatible pairs of alkaloidless varieties.
Dokl. AN SSSR 155 no. 2:448-450 Mr '64. (MIRA 17:5)

1. Institut botaniki i mikrobiologii i Otdel genetik i tsitologii A BSSR. Dokl. AN BSSR (for Turbin).

30048
S/046/61/007/004/003/014
B139/B102

3.5140 (1041)

AUTHORS:

Zverev, V. A., Spiridonova, I. K.

TITLE:

Determination of atmospheric turbulence characteristics on the basis of statistical sound-field analysis

PERIODICAL: Akusticheskiy zhurnal, v. 7, no. 4, 1961, 428-435

TEXT: Phase and amplitude fluctuations occurring in the propagation of sound waves in the atmosphere are caused by inhomogeneities. The authors developed a method for the determination of atmospheric inhomogeneities and mean squares of phase fluctuations by measuring the correlation coefficient of a sound field in the atmosphere. L. A. Chernov (Akust. zh., 1957, 2, 2, 192-194) established a relation between the field correlation function and the autocorrelation functions of amplitude and phase fluctuations for the case of crosscorrelation:

$$\overline{E_1 E_2} = E_0^2 \exp(2A^2) \exp \left[A^2 (R_A - 1) + \varphi^2 (R_\varphi - 1) \right] \quad (2),$$

where E is the field, A is the amplitude fluctuation, φ is the phase
Card 1/4

Determination of atmospheric turbulence ³⁰⁰⁴⁸ S/046/61/007/004/003/014
B139/B102

fluctuation, R_A and R_φ are the correlation coefficients of amplitude and phase fluctuations, respectively. The authors determined the field correlation caused only by a phase fluctuation. In this case ($A = 0$),

$$\ln R_E = \overline{\varphi^2} (R_\varphi - 1) \quad (5)$$

is valid. For $d \ll a$, and considering that, in the case of crosscorrelation $R_\varphi = \exp(-d^2/a^2)$, Eq. (5) goes over into

$$\ln R_E = -\overline{\varphi^2} \frac{d^2}{a^2} \quad (8).$$

d is the base, and a is the dimension of inhomogeneities. If, however, $d \gg a$, $\ln R_E = -\overline{\varphi^2}$. $\ln R_E = f(d^2)$ is a straight line which passes through

the origin and forms an angle α with the abscissa: $a = \sqrt{\overline{\varphi^2}} \tan \alpha$.
K. A. Norton calculated R_E from the curve $\varphi_{k_1} = f(\varphi)$ ($\varphi = d/a$), and

Card 2/4

MIKHLIN, I.I.; SPIRIDONOVA, I.P.

Cleaning the interior of pipelines with spheres (from foriegn periodicals).
Stroi. truboprov. 7 no.11:28-29 N '62. (MIRA 13,12)
(Pipelines)

REF: 1381579 R A

Country : USSR
 Category : Farm Animals
 Abs. Jour : *Dokl. Akad. Nauk SSSR*, No 11, 1959, 74004
 Author : Spiridonova, I. A.
 Institut. : AS USSR Institute of Biology, Ural Affiliate.
 Title : The Skeleton's Ossification Processes in the Region of the Carpal Joint in Cattle.
 Orig. Pub. : *Tr. Inst. Biol. Ural'skiy Fil. AN SSSR*, 1957, vyp. 4, 29-41
 Abstract : An X-ray examination of the skeleton's carpal joint region and of the adjacent areas of the right anterior extremity where many cartilage and osseous elements are to be found, a fact which permits to evaluate the dynamics of processes determining the ossification of the entire skeleton, was conducted on 107 animals of the Tagil'skiy and local cattle breeds which were kept in the sovkhoses and kolkhoses of the Sverdlovskaya oblast' under various feeding and keeping conditions. The first year of the ani-

Card: 1/3

Country : USSR
 Category : Farm Animals. Q-2
 Cattle.
 Abs. Jour : Ref Zhur-Biol., No 16, 1958, 74004
 Author :
 Institut. :
 Title :
 Orig Pub. :
 Abstract : Mol's postembryonic development proved to be
 the most intensive period of skeletal growth
 and during this period biologically full-valued
 feeding was required. The differentiation of
 skeletal bones within the carpal region was
 directly correlated to the intensified function
 of the entire extremity. Motion, traction, pres-
 sure were of decisive significance in the final
 formation of the joint. In its development, the
 skeleton of the males surpassed the skeleton of
 Card: 2/3

Country : USSR Q-3
 Category : Farm Animals.
 Swine.
 Abs. Jour : Ref Zhur-Biol., No 16, 1958, 74069
 Author : Spiridanova, K. A.
 Institut. : AS USSR Institute of Biology, Ural Affiliate.
 Title : X-Ray Characteristics of the Heart and of Its
 Diametric Measurements in Piglets.
 Orig. Pub. : Tr. In-ta biol. Ural'skiy fil. AN SSSR, 1957,
 vyp. 5, 42-46
 Abstract : In the "Istok" sovkhos, 104 piglets from birth
 to the age of 2 months were examined by X-rays.
 The correlation of the heart to the thoracic
 cavity, the length and the diameter of the
 heart, the circumference of the thoracic cavity
 and the weight of the piglets were determined.
 The diameter of the heart is larger at birth in
 males, but it increases more intensively in fe-
 males until the age of 2 months. The growth of
 the thoracic cavity circumference lags behind
 Card: 1/3

SPIRIDONOVA, K. A.

23114 Opyt rentgenovskogo zheldochno-kishechnogo trakta i fiziologii pishchevareniya i krota. - talra europaea L. Zool. Zhurnal, 1949, vyp. 4, C. 382-84.

SO: LETOPIS' NO. 31, 1949

GULYAYEV, A.P.; SPIRIDONOVA, K.S.

Mechanical properties during tool steel torsion. Izv.vys.ucheb.
zav.; chern.met. no.5:142-145 '60. (MIRA 13:6)

1. Moskovskiy vecherniy mashinostroitel'nyy institut.
(Tool steel--Testing)

RUDNER, L.Ya.; SPIRIDONOVA, L.A., nauchn. red.

[Electrical ceramic metal goods; Magnetic and dielectric materials; a survey of foreign patents] Elektrotekhnicheskie metallokeramicheskie izdeliia: Magnitnye i dielektricheskie materialy; obzor inostrannykh patentov. Moskva, TSentr. nauchno-issl. in-t patentnoi informatsii i tekhniko-ekon. issledovani, 1964. 21 p. (MIRA 18:7)

[illegible]

violation of the instrument by the Hankal method in hydrosaline
prolonged hemorrhages. Aush. 1 sin. no. 244-242 '55. (v)

(MIRA 18:10)

1. Sverdlovskiy nauchno-issledovatel'skiy institut okhrany
materinstva i detstva (direktor - R.A. Malyшева).

SHUBENKO, P.Z.; SVIRIDONOVA, L.I.

Processes taking place during the heating of fine-grained
coal in vortex chambers. Izudy (GE 20:72-75 '63.

(MIRA 17:8)

L 44401-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6023640

SOURCE CODE: UR/0149/66/000/002/0129/0134

AUTHOR: Zubov, V. Ya.; Grachev, S. V.; Kirillov, Yu. L.; Spiridonova, L. M.; Norkina, E. B.

ORG: Department of Metallurgy, Ural Polytechnic Institute (Kafedra metallovedeniya Ural'skiy politekhnicheskii institut)

TITLE: Study of mechanical properties and relaxation stability of Cu-Ti alloys

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 2, 1966, 129-134

TOPIC TAGS: copper containing alloy, titanium containing alloy, chromium containing alloy, mechanical property, tensile strength, elastic modulus, stress relaxation, temperature dependence

ABSTRACT: The effect of certain factors of stress relaxation and other mechanical properties of five Cu-Ti alloys was studied. The alloys had Ti contents ranging from 1.10 to 5.50%; two of the alloys had Cr contents of 0.52 and 1.00%. After vacuum melting and remelting, 60 kg ingots were reduced to strip (6 mm wide by 0.4 and 0.25 mm thick) which was heated to 860°C for 1 hr, quenched into water and cold worked 20, 40, 60 and 80%. Aging was carried out at 300, 350, 400, 450 and 500°C for 1 to 5 hrs. The best strengths were obtained by aging at optimal temperatures for 2 hrs. Tensile strengths and relative elongations are given as functions of aging temperature for all alloys in

UDC: 669.35'295:669.018.2

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I 44401-56

ACC NR: AP6023640

the quenched and quenched + 60 % deformed condition. The highest strength (118 kg/mm²) was for 5.50% Ti + 0.52% Cr additions. Elastic moduli and electroconductivities for all alloys after quenching + 40% deformation are given. Maximum moduli were observed at aging temperatures of 400-450°C and for all alloys the limit was 60-70 kg/mm². The best heat treatment, resulting in optimum combinations of strength and ductility, was obtained after deforming the quenched alloys 40-60% and aging at 400-450°C. These properties are considered to be ideal for replacing Cu-Be alloys used in springs. Alloying of Cu with Ti and Cr increased the electrical conductivity after quenching, however, this dropped considerably upon aging as a result of second phase decomposition. The elastic modulus, determined by the dynamic method, is given as a function of aging temperature and compared with beryllium bronze BrB2. This modulus rose sharpest for BrB2 indicating a faster decomposition of the solid solution. By increasing the Ti content the dynamic modulus decreased, probably as a result of a lowered interatomic bonding. Relaxation tests (relative relaxation stability as a function of time) were run at 200 and 400°C and the results were compared to BrB2. The Cu-Ti alloys had 4-15 times the relaxation stability at 400°C of BrB2. Again the best alloy was the 5.50% Ti + 0.52% Cr. Orig. art. has: 5 figures, 1 table, 1 formula.

SUB CODE: 11,20/ SUBM DATE: 06Oct64/ ORIG REF: 006

Card

2/2 egh

PAVLOV, A.P., doktor tekhn. nauk; GORENSHTEYN, B.V., kand. tekhn. nauk;
VINOGRADOV, G.G., inzh.; SPIRIDONOVA, L.Ye., inzh.;
BEKMURZIN, A.G., inzh.

Results of using cylindrical shells. Bet. i zhel.-bet. 9
no.11:489-495 N '63. (MIRA 17:1)

1. Leningradskiy inzhenerno-stroitel'nyy institut (for Pavlov).

MEZENCHUK, Ye.A.; KRASOV, V.M.; SPIRIDONOVA, M.I.; KATSOVA, L.B.

Change in the blood protein fractions during the treatment of
rheumatic fever. Zh. v. Kazakh. 23 no.4:28-32 '63.

(MIRA 17:5)

1. Iz kafedry fakul'tetskoy terapii (zaveduyushchiy - dotsent Ye.
A. Mezenchuk) Alma-Atinskogo medits'nskogo instituta i biokhimicheskoy
laboratorii (zaveduyushchiy -- V.M. Krasov) Kazakhskogo nauchno-
issledovatel'skogo veterinarnogo instituta.

SPIRIDONOVA, M.V. (Moskva)

Disorders of the [heart] conducting function in thyrotoxicosis. Klin. med. 41 no.6:49-51 Je '63.

(MIRA 17:1)

1. Iz 1-y terapevticheskoy kliniki (zav. - doktor med. nauk M.G. Malkina) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F. Vladimirovskogo (MONIKI).

KALUGINA, I.T.; SPIRIDONOVA, M.V.

State of the cardiovascular system in an adrenal crisis deriving from Addison's disease. Sov.med. 28 no.7:24-27 JI '65.

(MIRA 18:8)

1. 1-ya terapevticheskaya klinika (zav. - prof. M.G Malkina)
Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo
instituta imeni M.F.Vladimirskogo (direktor - kand.med.nauk P.M.
Leonenko).

KALININ, K.P.; LYAMINA, M.P.; SPIRIDONOVA, M.Z.

Production of high-purity nickel strips. TSvet. met. 31 no. 7:56-60
J1 '58.

(MIRA 11:8)

(Nickel--Metallurgy)

(Vacuum metallurgy)

SOV/136-59-1-18/24

AUTHORS: Kalinin, K.P. and Spiridonova, M.Z.

TITLE: Investigation of the Properties of Copper-Titanium Alloys
(Issledovaniye svoystv medno-titanovykh splavov)

PERIODICAL: Tsvetnyye Metally, 1959, Nr 1, pp 82-88 (USSR)

ABSTRACT: The authors note the paucity of published data on copper-titanium alloy properties and briefly review the results of three (English and German) investigations (Refs 1,2,3). They go on to describe their own work, whose object was to find structural alloys for industrial use. Alloys were melted from grade MO cathodic copper, 98.00-% pure sintered titanium, electrolytic manganese and nickel, aluminium, zinc and chromium of grades N-1, A-1, Ts-1, and Kh-1, respectively. 1-1.2 kg specimens were melted in cylindrical graphite crucibles in an induction furnace. Before pouring into iron moulds the alloy temperature was reduced from 1300-1400°C to 1150-1200°C. A first series of tests on 80 alloys with titanium contents of 0.3-14% enabled solubility limits for titanium in copper to be found (Fig 1) and showed that 4-5% was the optimal content for mechanical properties.

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SOV/136-59-1-18/24

Investigation of the Properties of Copper-Titanium Alloys

Fig 2 shows Vickers hardness (H_B) in kg/mm^2 , strength (kg/mm^2) and relative elongation, % as functions of titanium content for 0-6% Ti in various conditions, values for the 4-5% Ti alloy being over 300, 100 and 5-6, respectively. With higher titanium contents pressure working of alloys becomes difficult. The influence of refinement temperature (200-525°C) and time of soaking (up to 100 hrs) on the properties of the alloys were studied: for binary alloys the optimal temperature is 450°C, the optimal times for 50% deformed and for hardened samples being 1.5-2 and 4-5 hours, respectively. For ternary alloys containing chromium the figures are 450°C and 1.5-2 hours and 500°C and 3-4 hours for the deformed and quenched states, respectively. Figs 3 and 4 show hardness at various refining temperatures as functions of time for 4.4% Ti binary and 5% Ti, 0.5% Cr ternary alloys. Determinations of strength and relative elongations were made at 0 - 700°C on binary and ternary alloys; the results (Table 1) show that the strength begins to decrease rapidly at 400-500°C. Cyclic-strength tests

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S OV/136-59-1-18/24

Investigation of the Properties of Copper-Titanium Alloys

were carried out on refined 48-mm diameter round and 1.18 mm thick strip specimens by methods used for beryllium bronze at 100 atm. Spiral specimens of refined binary alloy (4.2% Ti) and beryllium bronze were used for determinations of elastic properties - Table 2 shows that these are about the same for the two materials. The authors tabulate (Table 3) the production conditions for copper-titanium and copper-titanium-chromium and the physical and mechanical properties for these two materials (4.8% Ti and 5% Ti, 0.5% Cr) and beryllium bronze grade Br2 (Table 4). Data for the latter were taken from the literature (Refs 4 and 5) and results on comparative corrosion stability were obtained at the "Giprotsvetmetobrabotka" Institute. The authors conclude that 5% Ti copper and 5% Ti, 0.5% Cr copper alloys are suitable for replacing beryllium bronze in

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